

Druckexemplat

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CLAIMS

1. A method of storing and/or retrieving location-based information, the method comprising:

storing indexing data defining a plurality of indexing nodes respectively

5 representing different ones of a plurality of first localities in relation to which information storage is accessible; and

selecting ones of said first nodes to represent second localities for which information is to be stored and/or retrieved such that:

i) said first and second localities bear a predetermined locational
10 relationship; and

ii) said first and second localities bear a predetermined relationship in size,

characterised by the step of distributing said indexing nodes amongst a distributed network of data storage devices accessible simultaneously for users at
15 a plurality of remote user terminals.

2. A method according to claim 1, wherein said first localities are selected such that said first and second localities share at least one geographical location.

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3. A method according to claim 1 ~~or 2~~, wherein said first localities are selected such that said first and second localities are similar in size.

4. A method according to claim 1, ~~2 or 3~~, wherein said data defines
25 access nodes which include a node representing a relatively large locality and one

26.07.00
35

or more nodes representing one or more relatively small localities which overlap said relatively large locality.

5. A method according to claim 4, wherein a plurality of said nodes
5 representing relatively small localities form divisions of said relatively large locality.

6. A method of storing location-based information, the method
comprising:

10 defining a plurality of indexing nodes each of which is responsible for a
predefined locality, said plurality of nodes including a higher level node responsible
for a larger locality and lower level nodes responsible for smaller localities which
overlap said larger locality.

15 indexing references to information sources containing locality-specific
information at said data access nodes, different information source references
being indexed at said higher level node than at said lower level nodes; and

transmitting said references from said indexing nodes on request.

characterised by the step of distributing said indexing nodes amongst a
distributed network of data storage devices accessible simultaneously for users at
a plurality of remote user terminals.

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7. A method according to claim 6, wherein at least one information
source reference is commonly indexed at said higher level node and said lower
level nodes.

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36

8. A method of storing location-based information, the method comprising:

defining a plurality of indexing nodes each of which are responsible for a predefined locality;

5 indexing references to information sources containing locality-specific information at said data access nodes, one or more of such references being repeatedly indexed at different of said nodes; and

transmitting said references from said data access nodes on request,

characterised by the step of distributing said indexing nodes amongst a
10 distributed network of data storage devices accessible simultaneously for users at a plurality of remote user terminals.

Claim 4
9. A method according to ~~any of claims 4 to 8~~, wherein said nodes are interlinked in a network structure.

15 10. A method according to claim 9, wherein said network structure is a hierarchical structure.

20 11. A method according to claim 10, wherein said nodes are interlinked in parent/child relationships.

a 12. A method according to claim 10 ~~or 11~~, wherein said nodes are interlinked in sibling relationships.

26.07.00 37

a 13. A method according to claim 10, ~~11 or 12~~, wherein said nodes are interlinked in uncle/nephew relationships.

a 14. A method according to claim 10, ~~11, 12 or 13~~, wherein said nodes
5 are interlinked in cousin/cousin relationships.

a 15. A method according to ^{claim 11} ~~any of claims 11 to 14~~, wherein said interlinking comprises a node holding a reference whereby the related node may be accessed.

10 a 16. A method according to ^{claim 4} ~~any of claims 4 to 15~~, comprising altering a distribution of said nodes amongst said data storage devices.

15 a 17. Apparatus for storing location-based information in accordance with the method of ^{claim 1} ~~any of claims 1 to 16~~.

18. A method of retrieving information for presentation to a user, the method comprising:

20 defining a locality of interest to the user in dependence on both a location of the user and a speed of travel of the user; and

selecting indexing nodes from which locality-specific information may be retrieved, on the basis of the defined locality of interest,

25 characterised by the step of distributing said indexing nodes amongst a distributed network of data storage devices accessible simultaneously for users at a plurality of remote user terminals.

26.07.00
38

19. A method according to claim 18, wherein the extent of the locality of interest of the user is altered in dependence on the speed of travel.

5 20. A method according to claim 19, wherein the extent of the locality of interest increases with the speed of travel.

21. A method according to ^{Claim 18} ~~any of claims 18 to 20~~, wherein the locality of interest is altered in dependence on the direction of travel of the user.

10 22. A method according to ^{Claim 18} ~~any of claims 18 to 21~~, comprising deriving parameters relating to the travel of the user from a positioning signal receiver travelling with the user.

15 23. A method according to ~~any of claims 18 to 22~~, comprising performing said selection in the apparatus of claim 17.

24. A method according to ^{Claim 1} ~~any of claims 1 to 16 or 18 to 23~~, wherein said network of data storage devices comprises a plurality of servers
20 interconnected by data links and forming a distributed processing environment.

25 25. Apparatus for storing location-based information, said apparatus comprising means for storing indexing data defining indexing nodes which are referentially interlinked, each said indexing node being provisioned with a locality for which it is responsible, and means for comparing the size of an input locality in

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39

relation to which information storage is to be accessed and a locality for which a said indexing node is responsible,

characterised by the step of distributing said indexing nodes amongst a distributed network of data storage devices accessible simultaneously for users at
5 a plurality of remote user terminals.

26. Apparatus according to claim 25, wherein said apparatus is reconfigurable by the addition of, or the removal of, one or more of said indexing nodes, so as to transfer responsibility from or to one or more other nodes with
10 localities of responsibility sharing at least one geographical location.

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